

CLAIMS

We claim:

1. A power controller having quadrant modes based upon an input voltage and an error circuit output, whereby a positive input voltage will determine that either Quadrant I or Quadrant II will be employed, and whereby a negative input voltage will determine that either Quadrant III or Quadrant IV will be employed; wherein selection of Quadrant I vs. Quadrant II or Quadrant III vs. Quadrant IV is dependent upon the error circuitry.
2. The power controller of claim 1 wherein the error circuitry compares output voltage to a reference and determines both the required direction of current flow and the required amount of modulation by way of an error amplitude output to maintain controller output regulation.
3. The power controller of claim 1 further comprising a capacitor connected across an output and a return of the controller whereby the combination of controller and capacitor functions as a variable capacitor.
4. The power controller of claim 1 further comprising an inductor connected across an output and a return of the controller whereby the combination of controller and inductor functions as a variable inductor.